ACCESSION NR: AP4041049   S/0120/64/000/003/0186/0189

AUTHOR: Gavrilova, N. D.; Novik, V. K.

TITLE: Outfit for dynamic study of the pyroelectric effect in a wide temperature range

SOURCE: Pribory* i tekhnika eksperimenta, no. 3, 1964, 186-189

TOPIC TAGS: pyroelectric effect, crystal pyroelectric characteristics

ABSTRACT: An outfit suitable for measuring pyroelectric characteristics of crystals within -190+120C is shown in Enclosure 1. Light from source 1 passes through flicker shutter 3 driven by motor 4. Thus, a modulated beam is focused, by optical system 2 of an IKS-11 spectrometer, at the surface of crystal 6 mounted in holder 7 inside cryostat 8. Details of the cryostat design are given. The effects of temperature and field strength on the pyroelectric current in a triglycine-sulfate crystal were studied on the above outfit; the results obtained

Card 1/3

ACCESSION NR: AP4041049

are said to be in agreement with A. Chynoweth's data (J. Appl. Phys., 1956, 27, 78, and Phys. Rev., 1956, 102, 1021). "The authors consider it their pleasant duty to thank V. A. Koptsik for his guidance, Ye. G. Valyashko and I. M. Sil'vestrova for their valuable advice re the outfit design, and also B. A. Strukov for his constant attention to the project and fruitful discussions." Orig. art. has: 4 figures and 1 formula.

ASSOCIATION: Moskovskiy gosudarstvenny*y universitet im. M. V. Lomonosova (Moscow State University); Moskovskiy stankoinstrumental'ny*y institut (Moscow Machine and Tool Institute)

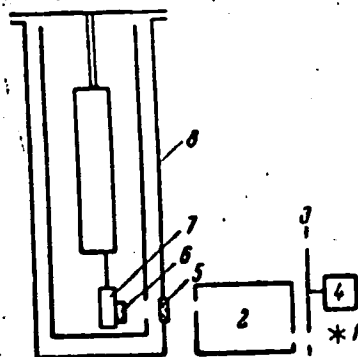SUBMITTED: 03Jul63   DATE ACQ: 00   ENCL: 01

SUB CODE: EC   NO REF SOV: 002   OTHER: 008

Card 2/3

Outfit for measuring the dynamic
pyroelectric effect

Card 3/3

L 28722-65   EWT(1)/EPA(s)-2/EEC(t)   Pt-10/Pl-4   IJP(c)   GG

ACCESSION NR: AP5004348   S/0070/65/010/001/0114/0116

AUTHOR: Gavrilova, N. D.

TITLE: New pyroelectric crystals

SOURCE: Kristallografiya, v. 10, no. 1, 1965, 114-116

TOPIC TAGS: pyroelectricity, piezoelectricity, crystal symmetry

ABSTRACT: In connection with the increased use of pyroelectrics as sensitive re-
corders of low heat fluxes, the author presents a table of 70 new crystalline pyro-
electrics, observed by her (at liquid nitrogen temperature) by means of powder
tests. The method was described by W. G. Cady (Piezoelectricity, McGraw Hill,
1946). The table lists the name, chemical formula, and symmetry of the crystal,
and shows that the known piezoelectric crystals possessing pyroelectric symmetry
are pyroelectrics. Orig. art. has: 1 table.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow
State University)

Card 1/2

L 28722-65

ACCESSION NR: AP5004348

SUBMITTED: 10Apr64   ENCL: 00   SUB CODE: SS

NR REF SOV: 002   OTHER: 002

Card 2/2

L 57581-65   EWT(1)/EWT(m)/EPF(c)/EWP(j)/T/EWP(t)/EEC(b)-2/EWP(b)   Pc-4/Pr-4/Pl-4
IJP(c)   JD/GG/RM

AUTHOR: Gavrilova, N. D.

TITLE: Use of the static method for studying the effect of temperature on the pyro-
electric coefficients of crystals

SOURCE: Kristallografiya, v. 10, no. 3, 1965, 346-350

TOPIC TAGS: pyroelectric effect, tourmaline, ferroelectric, crystallography

ABSTRACT: The equivalent circuit for measuring pyroelectric charge by the static
compensation method was calculated and analyzed. An experimental set-up is des-
cribed as well as the results of its operation with green tourmaline. The pyro-
electric coefficient was measured as a function of temperature under constant me-
chanical stress for single crystals of barium titanate and triglycerin sulfate. It
was established that application of a constant electric field to the crystal dis-
places the peak value of the pyroelectric current towards the Curie point and
smooths it out substantially. At the temperature of the maximum pyroelectric effect
T_M (below the Curie temperature) the domain structure of the ferroelectric is reor-

Card 1/2

L 57581-65
ACCESSION NR: AP5013716

ganized so that when external fields are absent, the crystal is transformed to a macroscopically neutral electric state. Orig. art. has: 5 figures, 3 formulas.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 13May64   ENCL: 00   SUB CODE: SS, EM

NO REF SOV: 005   OTHER: 008

Card 2/2

L 7845-66   EWT(1)/EWP(e)/EPA(s)-2/EWT(m)/EWP(i)/EPA(w)-2/EWP(t)/EWP(b)   IJP(c)

ACC NR: AP 5028099   JD/GG/WB   SOURCE CODE: UR/0048/G5/029/011/1969/1973

AUTHOR: Kopstik, V.A.; Gavrilova, N.D.

ORG: Physics Department, Moscow State University im. M.V. Lomonosov (Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta)

TITLE: Experimental investigation of the pyroelectric effect in ferroelectric crystals /Report, Fourth All-Union Conference on Ferro-electricity held at Rostov-on-the-Don 12-16 September 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya. v. 29, no. 11, 1965, 1969-1973

TOPIC TAGS: Pyroelectricity, ferroelectricity, single crystal, electric domain structure, barium titanate, ferroelectric crystal, organic crystal

ABSTRACT: Measurements by one of the authors (N.V. Gavrilova, Kristallografiya, 10, 346 (1965)) of the pyroelectric constants of barium titanate, triglycine sulfate, and Rochelle salt are presented graphically and discussed with reference to the dynamic theory of V.Kh. Kozlovskiy (Izv. AN SSSR. Ser. fiz., 29, No. 6, 882 (1965)). The measurements were made by a static compensation method while the samples (0.1-0.6 mm thick 8-32 mm^2 area crystal plates) were heated in the absence of an external field. These are the first absolute static measurements with an accuracy of 2.3% of the pyroelectric constants of barium titanate and triglycine sulfate. The maximum of the pyroelectric constant occurred for all the materials at a

Card 1/2

L 7845-66

ACC NR: AP 5028099

temperature considerably below the Curie point. The maximum of the pyroelectric constant is associated with a transformation of the domain structure from the unipolar state to the macroscopically nonpolar state. The temperature (T) dependence of the polarization (P) was given for all the materials by the equation $T/T_m = (P/P_m)^2(2 - (P/P_m)^2)$, where T_m and P_m are constants. This formula was derived from the dynamic theory (loc.cit.surpa) for an antiferroelectric with two rigid sublattices; for the case of a ferroelectric with a domain structure, the formula corresponds to neglect of the contribution of the surface energy of the domain walls to the free energy of the crystal. Orig. art. has: 9 formulas and 4 figures.

SUB CODE: SS, EM, TD   SUBM DATE: 00/   ORIG. REF: 007 OTH REF: 005

Card   2/2

SOV/144-58-10-6/17

AUTHORS: Berger, A.Ya., Candidate of Technical Sciences, Professor
Gavrilova, N.G., Assistant

TITLE: The Optimum Length of Air Gap Under the Main Poles of
Direct Current Machines (Ob optimal'noy velichine
vozdushnogo zazora pod glavnymi polyusami mashiny
postoyannogo toka)

PERIODICAL:Izvestiya Vysshikh Uchebnykh Zavedeniy, Elektromekhanika,
1958, Nr 10, pp 52-64 (USSR)

ABSTRACT: Surprisingly little attention has been paid to
selection of the air gap length in d.c. machines. The
object of this article is to analyse the influence of
the air gap length on the main properties of the d.c.
machine to review the existing recommendations of
various authors and to suggest criteria for selection of
the air gap length and determination of its best value.
Recommended air gap lengths for machines without
compensating windings are first considered, starting
with Arnold's recommendation designed to ensure
satisfactory commutation. Formula (2) given by Richter
and others is used in the Elektrosila works, values of
Card 1/4   the factor k are given in Table 1. Three other

The Optimum Length of Air Gap Under the Main Poles of Direct
Current Machines

recommendations are also given. Recommendations for
machines with compensating windings are then given
particularly that of Kas'yanov, see Eq (6). Values
of k in formula (2), recommended by various authors and
used in actual machines are compared in Table 1, and
values of k, the air gap length and numerous other data
for a number of motors manufactured by Elektrosila and
also for the Siemens GM series are given in Tables 2, 3
and 4. It is shown that some of the formulae give air
gap lengths very different from those actually used and
that none of the authors takes into account all the.
factors that should be considered in selecting the
length of air gap. Properties of a direct current machine
that depend on the length of the air gap are then
considered in turn, particularly: the weight of the
field winding; the stray losses of the pole-piece
surfaces; the amplification factor of the machine;
the time constant of the machine; the noise; the
Card 2/4   speed and critical speed of the motor; and the greatest

The Optimum Length of Air Gap Under the Main Poles of Direct Current Machines

output that can be obtained from a machine of a given diameter. Certain criteria governing the best choice of air gap length for machines with compensating windings are then given. Eq (21) is obtained for the best air gap length determined from the criterion of minimum losses on excitation and on the pole piece surfaces. Eq (22) is obtained for the best air gap length from considerations of overall costs. It is concluded that for machines without compensating windings the air gap length is best selected by appropriate choice of the factor k in Eq (2). To a first approximation the value may be selected from Tables (1) and (2) but it is necessary to check that the voltage between neighbouring commutator bars is not too great. The method of doing this is briefly explained. For machines with compensating windings it is recommended to use Kas'yanov's formula (6) and to check it against the expressions for minimum loss and minimum overall cost. For high speed machines with relatively high losses on the pole piece surfaces, it is advisable to use formula (21) derived for the least cost.

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SOV/144-58-10-6/17

The Optimum Length of Air Gap Under the Main Poles of Direct Current Machines

In using this formula it should be checked that the reduction in the losses is great enough and that it does not lead to excessive increase in size and weight of the machine. Numerical examples of calculation of optimum air gap length are given in an appendix. There are 2 figures, 4 tables and 11 references, 8 of which are Soviet and 3 German.

ASSOCIATION: Kafedra elektricheskikh Mashin i Apparatov Severo-Zapadnogo zaochnogo Politekhnicheskogo Instituta (Chair of Electrical Machines and Apparatus, North West Correspondence Polytechnical Institute) (Berger) Leningradskiy Institut Aviatsionnogo Priborostroyeniya (The Leningrad Aviation Instrument Institute) (Gavrilova)

SUBMITTED: 4th June 1958

Card 4/4

SHPICHINETSKIY, Ye.S.; ROGEL'BERG, I.L.; LUZENBERG, A.A.; GOLOMOLZINA, Yu.A.
AGAFONOV, A.K.; Prinimali uchastiye: MIZONOV, V.M.; GALAKTIONOVA,
G.A.; GAVRILOVA, N.G.; SAMSONOV, I.P.; KOPEYKA, E.I.; GLEBOV, V.P.

Investigating th' darkening of nickel strips during annealing.
Trudy Giprotsvetmetobrabotka no.20:125-135 '61.   (MIRA 15:2)
    (Nickel--Heat treatment)   (Annealing of metals)

GAVRILOVA, N.G.; GUSEV, A.V.; DZHAILILOV, U.

Dactylogyrus from Capoetobrama kuschakewitschi (Kessler).
Trudy Zool. Inst. 35:132-136 '65.   (MIRA 19:1)

1. Zoologicheskiy institut AN SSSR; Leninabadskiy gosudarstvennyy
pedagogicheskiy institut imeni S.M. Kirova, i Institut zoologii
i parazitologii AN Tadzhikskoy SSR.

Gavrilova, N.I.

Category : USSR/Optics - Physiological Optics   K-9

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 5324

Author   : Gavrilova, N.I.
Inst   : Leningrad State University, USSR
Title   : On the Investigation of the Functional State of the Human Visual
           Analyzer.

Orig Pub : Probl. fiziol. optiki, 1955, 11, 9-13

Abstract : Measurement of the light threshold, equivalent to the optical chronaxis,
           to the chronaxis of phosphene, and to the threshold of doubling of
           phosphene where measured in five persons (chronaxis is the threshold
           time of action of a stimulus that is twice as strong than the thres-
           hold stimulus upon prolonged action; the threshold of doubling is the
           minimum interval between two stimulations, at which it is noticeable that
           the stimulation is doubled. During the process of darkness adaptation
           the chronaxis increases in most observers, but in one observer it was
           diminished somewhat; the threshold of doubling diminishes, and the
           threshold of phosphene increases slightly. In addition, a study was
           made of the action of certain medications on all the above thresholds,
           and of the relationship between the duration and the threshold intensity
           of thelight pulse at the different stages of adaptation.
Card   : 1/1

GAVRILOVA, N.I.

Trace reflex phenomana in the development of color and light discrimi-
nation [with summary in English]. Vest. LGU 13 no.3:142-147 '58.
(SIGHT)   (CONDITIONED RESPONSE)   (MIRA 11:5)

GAVRILOVA, N.I.; KROL', T.M.

Work at the seminar on neurodynamics. Vest. LGU 13 no.3:152-154 '58.
(NERVOUS SYSTEM)   (MIRA 11:5)

GAVRILOVA, N.I.

Conditioned reflex variations in the excitability of the visual analysor in man. Uch. zap. LGU no.239:146-153 '58.

(MIRA 12:1)

1.Laboratoriya fiziologii analizatorov Fiziologicheskogo instituta Leningradskogo gosudarstvennogo universiteta.
(VISION) (CONDITIONED RESPONSE)

GAVRILCVA, N. I., Cand Biol Sci -- (diss) "Adjusted conditioned reflexes of the visual analyzer in man." Leningrad, 1960. 15 pp; (Leningrad Order of Lenin State Univ im A. A. Zhdanov); 200 copies; price not given; (KL, 24-60, 130)

GAVRILOVA, N.I.

Selective change in the excitability of the visual analyzer
following development of a conditioned reflex. Nerv. sist.
no. 2:142-145 '60.   (MIRA 14:4)
(REFLEXES)

GAVRILOVA, N.I.

Formation of "tuning" conditioned reflexes in man. Zhur. vys. nerv.
deiat. 10 no.2:195-199 Mr-Ap '60.   (MIRA 14:5)

1. Laboratory of Physiology of Analysers, Uktomsky Institute of
Physiology, Leningrad University.
          (CONDITIONED RESPONSE)   (VISION)

41532

S/822/62/000/003/001/001
D296/D307

27.6110

AUTHOR: Gavrilova, N.I.

TITLE: Dependence of the visual threshold on the shape and
               area of the test-object

SOURCE: Leningrad. Universitet. Fiziologicheskiy Institut.
               Nervnaya sistema, no. 3, 1962, 135-138

TEXT: The author studied the relation of two factors:
intensity and space (in particular the shape of the test-object) in
estimations of the absolute visual threshold of a human eye adapted
to darkness. The experiments were carried out with the aid of an
optical adequatometer (constructed by P.O. Makarov) provided with a
special iris diaphragm which permitted any desired variation of the
exposed area of the retina. After an initial adaptation period in
the dark, lasting for 20 minutes, one eye was exposed to light for
10 minutes (intensity of light on the adaptation screen 100 cp);
after a second adaptation period the visual threshold was measured
at 5 minute intervals. Study of the relation between the size of

Card 1/2

Dependence of the visual ...

S/822/62/000/003/001/001
D296/D307

the exposed retina area and the visual threshold revealed that
these two magnitudes were in a hyperboloid relation both in the
case of achromatic and of color vision. To this purpose a small
(10'-5°) and large retinal areas (11°-55°) were respectively exposed
to light. The second variant of the experiments was concerned with
the relation between the visual threshold and the shape of the test-
object: circles, squares, triangles and rectangles. Here two differ-
ent thresholds: - the first perception of diffuse light and the
threshold of recognition of the shape - were estimated. The thresh-
old for diffuse light perception proved to be almost independent on
the shape of the object; the visual threshold for recognition of
the shape, however was significantly higher for circles and squares
than for triangles and rectangles of identical area. There are 2
figures and 2 tables.

ASSOCIATION: Kafedra biofiziki (Department of Biophysics)

Card 2/2

GAVRILOVA, N. P.

X-ray study of the alloys in the ternary system manganese-nickel-aluminum. An. M. Shtern, N. P. Gavrilova, and E. G. Kapustina. *Byull. Lvov. Politekh. In-ta* F. G. Kapustina. *Byull.* ... Pub. 1955, No. 2, 71-9 (in 1954 (L'vov; Univ. Izdatel.), Pub. 1955, No. 2, 71-9 (in Ukrainian).—*Referat. Zhur., Met.* 1956, No. 3448.—Alloys contg. 60 and 26 at. % of Al were heated at 400° for 150 hrs. and at 800° for 3 hrs., and quenched in water. At 400° the electron compd. NiAl and also close to it a ternary alloy have a homogeneous structure. At 800° all alloys are homogeneous; therefore between NiAl and MnAl there exists a continuous series of solid solns. MnAl is heterogeneous. At 400° and 800° the zone of homogeneity of this electron compd. is displaced somewhat toward the greater Al content. At 25 at. % of Al all alloys with the least content of Ni are homogeneous. At 800° Ni₃MnAl was homogeneous; Ni₃Mn₃Al, heterogeneous. The formation of continuous series of ... soln. between NiAl and MnAl at 800° is connected ... ly with the absence of ternary electron compds. in the zone of the system Mn-Ni-Al that was studied. Alexis R. ...

GAVRILOVA, N. S.

GAVRILOVA, N. S.- "Effect of the Time of the First Breast Feeding of a Newborn Baby on the Lactation and on the Change in its Weight." Khar'kov Med Inst, Khar'kov, 1955 (Dissertations for Degree of Candidate of Medical Sciences)

SO: Knizhnaya Letopis' No. 26, June 1955, Moscow

ACC NR: AT6026766

SOURCE CODE: UR/2754/66/000/005/0031/0050

AUTHOR: Gavrilova, N. S.; Kirillov, V. V.

ORG: none

TITLE: Propagation of long wavelength waves. Computation of coefficients of reflection of plane waves from a nonhomogeneous anisotropic plasma

SOURCE: Leningrad. Universitet. Problemy difraktsii i rasprostraneniya voln, no. 5, 1966. Rasprostraneniya radiovoln (Radio wave propagation), no. 4, 31-50

TOPIC TAGS: plasma wave propagation, radio wave propagation, LF propagation, ionospheric propagation

ABSTRACT: The reflection properties of the ionosphere in the region of kc frequencies is studied. The problem is formulated mathematically for day and night models of the electron density distributions which take into account the presence of the earth's magnetic field. The admittance and reflection matrices were computed on the M-20. They show that at low frequencies (<10-15 kc) the change in electron density gradients has a negligible effect on these quantities. The results further show the effect of the angle of incidence of the broadcast wave on the ionosphere. The quasi-Brewster effect is found to have some influence on the reflection coefficients; the magnetic field effects are small when grazing incidence angles are considered. An error analysis of

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ACC NR: AT6026766

the analytical method indicates that frequency regions can be selected where the ac-
curacy of the results is very good. For illustration, several numerical examples have
been worked out. The results show that the effect of uncertainty in the initial con-
ditions on the reflection and admittance coefficients is of the order of a few percent
for realistic cases. Orig. art. has: 7 figures, 12 formulas, 3 tables.

SUB CODE: 17,20/   SUBM DATE: none/   ORIG REF: 004/   OTH REF: 017

Card 2/2

IVANOVSKAYA, T.L.; GAVRILOVA, N.S.

Effectiveness of localized surface placement of organomineral
fertilizers for beets and eggplants. Agrobiologiia no.6:93-97
N-D '58.   (MIRA 12:1)

1.Institut genetiki AN SSSR, g. Moskva.
          (Sugar beets--Fertilizers and manures)
          (Eggplant--Fertilizers and manures)

GRISHCHENKO, I.I., prof. ; GAVRILOVA, N.S., kand.med.nauk

Rural obstetrical service in Kharkov Province. Akush. i gin.
no.2:103-105'63.   (MIRA 16:10)
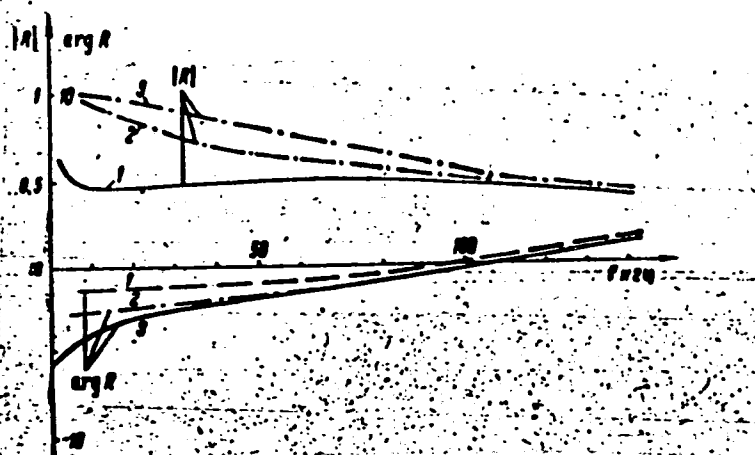   (KHAR'KOV PROVINCE — OBSTETRICS)

Fig. 4   Comparison of various computation methods for $\Psi = 70^\circ$:
      1 - numerical integration,
      2 - standard (asymptotic) equation,
      3 - W.K.B.

Card   7/7

ACCESSION NR: AT4043150   S/2754/64/000/003/0192/0201

AUTHOR: Gavrilova, N. S.; Loginova, O. N.; Makarov, G. I.

TITLE: Calculation of the reflection coefficient of a smooth heterogeneous layer

SOURCE: Leningrad. Universitet. Problemy* difraktsii i rasprostraneniya voln, no. 3, 1964. Rasprostraneniye radiovoln (Radio wave propagation), no. 3, 192-201

TOPIC TAGS: radio wave, radio wave propagation, radio wave reflection, reflection coefficient

ABSTRACT: This article is a continuation of the authors' previous work in which they derived the asymptotic forms of solutions of Maxwell's equations, applicable to the propagation of radio waves in an unbounded, smooth layer. In this work, the numerical integration of Maxwell's equations for a heterogeneous layer is performed and the resulting values of the reflection coefficient are compared with the values obtained from asymptotic solutions and solutions of the W.K.B. type as described by L. M. Brekhovskikh. The dielectric

Card   1/7

ACCESSION NR: AT4043150

constant is assumed to be uniform up to an altitude z_{cr} after which it is assumed to vary with altitude and frequency

$$1 - \frac{CP_n(z)}{f(f + i\frac{\nu}{2\pi})} \, ,$$

where $P_n(z)$ is a third degree polynomial approximation of the electron concentration for $z < 100$km. The results of asymptotic computations are shown in Figure 1 of the Enclosure. Numerical integration is used to evaluate the normalized wave admittance $\widehat{A}$, from which the reflection coefficient for various angles of incidence is obtained using the standard formula. The computation was performed on a "Strela" computer using the fourth-order accuracy Runge-Kutta formula with automatic step selection. Selection of an optimum integration interval and of proper initial conditions resulted in an overall relative error in $\widehat{A}$ of 10^{-3}. Figure 2 of the Enclosure shows the results of numerical integration while Figures 3 and 4 give a comparison of the 3 methods. Orig. art. has: 16 equations, 1 table, and 8 figures.

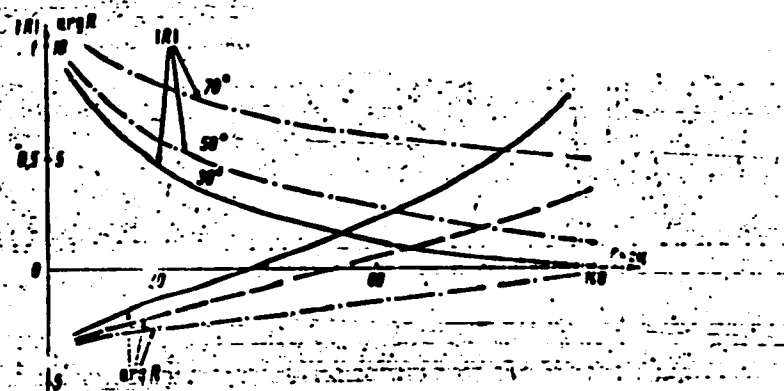ASSOCIATION: Leningradskiy universitet (Leningrad University)

Card   2/7

Fig. 1 Reflection coefficient $R(f) = |R(f)|\ e^{i\ arg\ R(f)}$ as a
function of frequency computed from the asymptotic formula
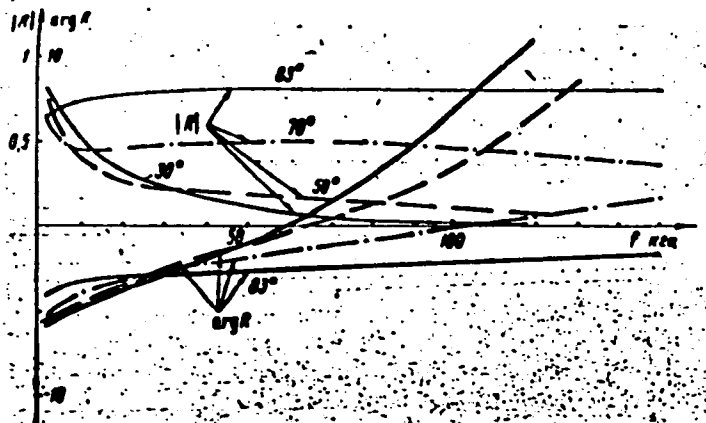for various values of the incidence angle Ψ.

Card 4/7

Fig. 2 Reflection coefficient $R(f) = |R(f)| \ e^{i \ \text{arg} \ R(f)}$ as a
function of frequency obtained by numerical integration.
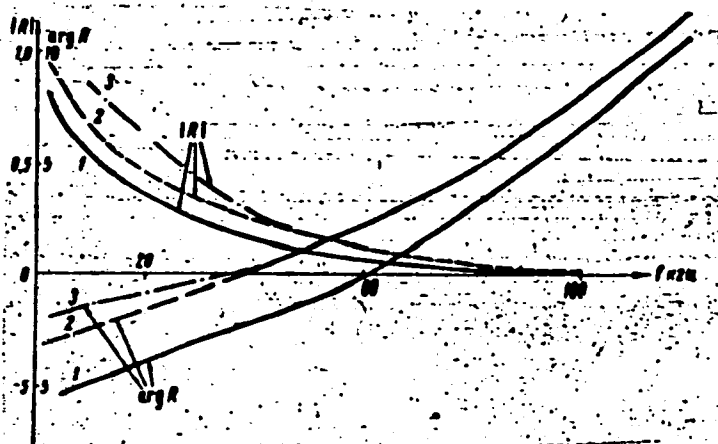Parameter is angle of incidence, ψ .

Card 5/7

Fig. 3 Comparison of various computation methods for $\Upsilon = 30^{\circ}$:
1 - numerical integration,
2 - standard (asymptotic equation),
3 - W.K.B.

Card 6/7

ACCESSION NR: AT4043150

SUBMITTED: 00   ENCL: 04   SUB CODE: EC

NR REF SOV: 007   OTHER: 000

Card 3/7

KAZARINOV, V.P., otv.red.vypuska; ROSTOVTSEV, N.N., glavnyy red.; SEGAL', Z.G.,
    vedushchiy red.; GURARI, F.G., zamestitel' glavnogo red.; AMSHINSKIY,
    N.N., red.; DERBIKOV, I.V., red.; KALUGIN, A.S., red.; MALIKOV, B.N.,
    red.; MIKUTSKIY, S.P., red.; SUKHOV, S.V., red.; TESLENKO, Yu.V., red.;
    UMANTSEV, D.F., red.; GAVRILOVA, N.V., red.; SAFRONOVA, I.M., tekhn.
    red.

[Geology and prospects for finding oil and gas in the northwestern part
of the Siberian Platform.] Geologicheskoe stroenie i perspektivy nefte-
gazonosnosti severo-zapada Sibirskoi platformy. Leningrad, Gostoptekhi-
zdat, 1963. 183 p. [Trudy Sibirskogo nauchno-issledovatel'skogo insti-
tuta geologii, geofiziki i mineral'nogo syr'ya, no.28.] (MIRA 16:11)

L 10219-66   EWT(d)/EWP(e)/EWT(m)/EWP(v)/T/EWP(t)/EWP(k)/EWP(b)/EWP(1)/EWA(c)

ACC NR: AP5028461   JD/WW/HM/WH   SOURCE CODE: UR/0286/65/000/020/0029/0029

AUTHORS: Rozin, N. A.; Roshchin, V. A.; Gavrilova, N. V.

ORG: none

TITLE: A device for soldering thin branches to quartz, ceramic, and other resonator plates of rectangular or circular form. Class 21, No. 175533

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 29

TOPIC TAGS: soldering, resonator

ABSTRACT: This Author Certificate presents a device for soldering thin branches to quartz, ceramic, and other resonator plates of rectangular or circular form. The device consists of a mechanism for determining the coordinates of the soldering point and a mechanism for delivering and clamping the branch. (See Fig. 1.) To increase the accuracy of centering the longitudinal axis of the branch, the mechanism for delivering and clamping the branch is made in the form of a spindle with a longitudinal cavity. This feeds the branch (by gravity) into a conical head at the end of the spindle (see Fig. 1). The head has a longitudinal

UDC: 621.372.412.002.54

Card 1/2

L 10219-66

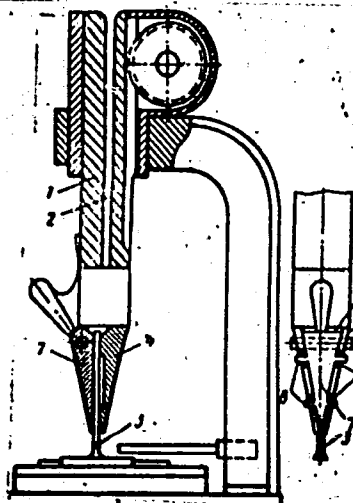ACC NR: AP5028461

Fig. 1. 1 - Spindle;
2 - longitudinal
cavity; 3 - branch;
4 - conical head;
5 - longitudinal
angular groove;
6 - grooves;
7 - clamping wedge;
8 - transverse
projections.

angular groove in which is installed a clamping wedge with two pairs of transverse projections in grooves of the conical head. Orig. art. has: 1 figure.

SUB CODE: 13/   SUBM DATE: 01Oct63/

Card 2/2

FLORENSKIY, P.V.; GAVRILOVA, O.A.

Changes in the density of permotriassic sediments in Tuarkyr.
Trudy MINKHiGP no.38:122-132 '62.   (MIRA 15:9)
                (Tuarkyr region--Rocks, Sedimentary--Density)

GAVRILOVA, O. A.

USSR / Diseases of Farm Animals.   General Problems.   R

Abs Jour: Ref Zhur-Biol., No 8, 1958, 35803.

Author   : Gavrilova, O. A.
Inst   : Not given.
Title   : Effectiveness of Using Biomycin in Pig Hus-
           bandry.

Orig Pub: Zhivotnovodstvo, 1957, No 5, 52-54.

Abstract: When biomycin (I) was fed to pigs in doses of
          20 milligrams per each feed unit, it had a
          stimulating effect upon the development and
          growth of the animals. After a month, the ex-
          perimental group animals gained 3 to 4 kilo-
          grams more in weight than the control group
          pigs. (I) was also used as a diarrhea prophy-
          lactic measure for piglets. On the farrowing
          day, a suspended solution of (I) in ecmolin was
          administered intramuscularly in doses of 100,

Card 1/2

AKSENOVA, N.F.; MASLENNIKOV, F.V.; GAVRILOVA, O.A., starshiy nauchnyy sotrudnik

Results of use of feed antibiotics. Veterinariia 36 no.12:54-55
D '59.
(MIRA 13:3)

1.Nachal'nik veterinarnogo otdela Oblsel'khozupravleniya Moskovskaya
oblast' (for Aksenova). 2.Direktor oblastnoy vetbaklaboratorii,
Moskovskaya oblast' (for Maslennikov) 3.Vsesoyuznyy nauchno-issledovatel'-
skiy institut zhivotnovodstva (for Gavrilova).
(Antibiotics)

GAVRILOVA, O. A.

"Antibiotics in cattle-breeding."

Veterinariya, Vol. 37, No. 2, 1960, p. 64

(GAVRILOVA, O. A.) - Cand. Vet. Sci., All-Union Sci. Res. Cattle-Breeding Inst.

KORENYAKO, A.I., kand. biol. nauk; GAVRILOVA, O.A., kand. sel'khoz. nauk

Preparation "Vitamicin." Vest. AN SSSR 32 no.6:80-82 Je '62.

(MIRA 15:6)

(VITAMINS-A)

CHINGAYEV, I.F.; GAVRILOVA, O.A., starshiy nauchnyy sotrudnik

Application of grisin on collective and state farms of Moscow
Province. Veterinariia 39 no.11:65-66 N '62.   (MIRA 16:10)

1. Glavnyy veterinarnyy vrach veterinarnogo otdela Moskovskogo
oblastnogo upravleniya proizvodstva i zagotovok sel'skokho-
zyaystvennykh produktov (for Chingayev). 2. Vsesoyuznyy
nauchno-issledovatel'skiy institut zhivotnovodstva (for Gavrilova).

GAVRILOVA, O. I., Cand Chem Sci — (diss) "The chemical characteristics of vitrains and fusains of metaphorphic series of Donbas coals," Moscow, 1960, 23 pp, (Institute of combustible Minerals, Academy of Sciences USSR).

(KL, 38-60, 106)

GAVRILOVA, O.I. (Leningrad)

Comparing certain methods of determining hydroxyl groups on Donets Basin coal vitrains. Izv.AN SSSR.Otd.tekh.nauk.Met.i topl. no.4: 187-188 Jl-Ag '60. (MIRA 13:9)
(Donets Basin--Coal--Testing) (Hydroxyl groups) (Acetulation)

VOLKOVA, I.B.; NALIVKIN, D.V.; SLATVINSKAYA, Ye.A.; BOGOMAZOV, V.M.;
GAVRILOVA, O.I.; GUREVICH, A.B.; MUDROV, A.M.; NIKOL'SKIY, V.M.;
OSHURKOVA, M.V.; PETRENKO, A.A.; POGREBITSKIY, Ye.O.; RITENBERG,
M.I.; BOCHKOVSKIY, F.A.; KIM, N.G.; LUSHCHIKHIN, G.M.; LYUBER,
A.A.; MAKEDONTSOV, A.V.; SENDERZON, E.M.; SINITSYN, V.M.; SHORIN,
V.P.; BELYANKIN, L.F.; VAL'TS, I.E.; VLASOV, V.M.; ISHINA, T.A.;
KONIVETS, V.I.; MARKOVICH, Ye.M.; MOKRINSKIY, V.V.; PROSVIRYAKOVA,
Z.P.; RADCHENKO, O.A.; SEMERIKOV, A.A.; FADDEYEVA, Z.I.; BUTOVA,
Ye.P.; VERBITSKAYA, Z.I.; DZENS-LITOVSKAYA, O.A.; DUBAR', G.P.;
IVANOV, N.V.; KARPOV, N.F.; KOLESNIKOV, Ch.M.; NEFED'YEV, L.P.;
POPOV, G.G.; SHTEMPEL', B.M.; KIRYUKOV, V.V.; LAVROV, V.V.;
SAL'NIKOV, B.A.; MONAKHOVA, L.P.[deceased]; MURATOV. M.V.;
GORSKIY, I.I., glav. red.; GUSEV, A.I., red.; MOLCHANOV, I.I.,
red.; TYZHNOV, A.V., red.; SHABAROV, N.V., red.; YAVORSKIY, V.I.,
red.; REYKHERT, L.A., red.izd-va; ZAMARAYEVA, R.A., tekhn. red

[Atlas of maps of coal deposits of the U.S.S.R.]Atlas kart ugle-
nakopleniia na territorii SSSR. Glav. red. I.I.Gorskii. Zam.
glav. red. V.V.Mokrinskii. Chleny red. kollegii: F.A.Bochkovskiy
i dr. Moskva, Izd-vo Akad. nauk SSSR, 1962. 17 p.
                                                  (MIRA 16:3)

1. Akademiya nauk SSSR. Laboratoriya geologii uglya. 2. Chlen-
korrespondent Akademii nauk SSSR (for Muratov).
                    (Coal geology—Maps)

KASATOCHKIN, V. I. (Moskva); YEGOROVA, O. I. (Moskva); GAVRILOVA, O. I. (Moskva)

Spectrochemical characteristics of the metamorphism of coal.
Izv. AN SSSR. Otd. tekh. nauk. Met. i topl. no.6:192-195
(MIRA 16:1)
N-D '62.

(Coal—Spectra)   (Metamorphism(Geology))

VOLKOV, V.N.; GAVRILOVA, O.I.; TOROPETS, S.A.

Relationship between specific gravity and density in the peat - anthracite series. Izv. AN SSSR.Ser.geol. 28 no.8:86-96 Ag '63.
(MIRA 17:2)

1. Ekspeditsiya No.5 Vsesoyuznogo nauchno-issledovatel'skogo geologicheskogo instituta, Leningrad.

BOGDANOVA, L.A.; GAVRILOVA, O.I.; TOPORETS, S.A.

Changes taking place in hard coal under the effect of minor transgressive intrusions. Dokl. AN SSSR 159 no.3:564-567 N '64
(MIRA 18:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut (VSEGEI). Predstavleno akademikom N.M. Strakhovym.

GAVRILOVA, O.M.

Role of "supplementary" sperms in the fertilization process of plants. Izv.
AN SSSR Ser.biol. no.6:37-45 N-D '53.   (MLRA 6:11)

1. Kafedra darvinizma Moskovskogo ordena Lenina Gosudarstvennogo universiteta
im. M.V.Lomonosova.   (Fertilization of plants)

USSR/Biology

GAVRILOVA, O.M

FD-1577

Card 1/   :   Pub. 42-9/11

Author   :   Gavrileva, O. M.

Title   :   Brief sketch on the history of the question of the role played by the amount of male sex elements in fertilization

Periodical   :   Izv. AN SSSR. Ser. biol. 5, 110-121, Sep-Oct 1954

Abstract   :   Discusses the question of the possibility of penetration by extra spermatoozoids and spermatozoons of the egg in fertilization and presents observations and findings of numerous researchers in this field. Also examines the role played by "additional" sperm which penetrate the vegetative tissue of plants and somatic tissue of animals. Criticizes the theory of monosperm fertilization. Micro-section drawings. Forty references: 35 USSR (26 since 1940).

Institution   :   Moscow State University

Submitted   :   July 5, 1954

GAVRILOVA, O.M.

Some growth characteristics of pollon tubes in wheat as related to the phenomenon of multiple fertilization. Trudy Inst. gen. no.28: 200-207 '61.

(FERTILIZATION OF PLANTS)

(MIRA 14:11)

GAVRILOVA, O.M.

    Possible participation of additional pollen tubes and
spermatozoids in fertilization in wheat ovaries. Trudy Inst.
gen. no.29:231-237 '62.   · (MIRA 16:7)

     (Wheat)   (Fertilization of plants)

GAVRILOVA, O.M.

Some characteristics of the genesis of spermatozoids in the tissues
of a wheat ovary. Trudy Inst. gen. no.30:291-300 '63.   (MIRA 17:1)

GAVRILOVA, O.M.

Effect of the amount of pollens on the fertilization process in Mirabilis jalapa. Dokl. AN SSSR 151 no.6:1444-1445 Ag '63.
(MIRA 16:10)

1. Predstavleno akademikom T.D.Lysenko.

GAVRILOVA, C.M.

Significance of the number of pollens in the fertilization of plants. Trudy Inst. gen. no.31:212-221 '64.   (MIRA 17:9)

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S/081/60/000/012(II)/010/010
A006/A001

15.9220

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 12(II), p. 632, # 49434

AUTHOR: Gavrilova, O.V.

TITLE: The У-30М (U-30M) Fuel-Temperature Packing Material

PERIODICAL: Za tekhn. progress (Sovnarkhoz Gor'kovsk. ekon. adm. r-na), 1958,
               No. 8-9, pp. 39-40

TEXT: The author investigated the properties of the U-30M packing material
(hermetics) which is a polysulfide polymer capable of self-vulcanization at room
temperature. The investigation reveals that U-30M is sufficiently kerosene- and
humidity-resistant and possesses the necessary adhesion properties. U-30M may be
used at 15-35°C. Complete vulcanization of U-30M at 20°C takes place within 7-
10 days. At a temperature raised to 100°C, the vulcanization process is reduced
to 8 hours. Negative properties of U-30M are: short service-life; insufficient
scale resistance and low stability.
                                            V. Zrelov

Translator's note: This is the full translation of the original Russian abstract.
   [Annotation: This appears to be a thiokol rubber.]

Card 1/1

KALINICHENKO, I.I.; NIKITIN, V.D.; GAVRILOVA, R.A.

Studying the conditions for the preparation of pure ammonium
lactate in the crystalline state. Prom. khim. reak. i osobo
chist. veshch. no.1:8-13 '63.   (MIRA 17:2)

16.6800 (1024, 1250, 1344)
9.7000

AUTHORS: Berlyand, O. S., Gavrilova, R. I., Prudnikov, A. P.

TITLE: Functions Satisfying the Differential Equation /6
              $y'' \pm 2xy' \pm 2ny = 0$

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 9,
              pp. 103-107

TEXT: In the first part of the present paper it is shown that the function
$y'' + 2xy' - 2ny = 0$ is satisfied by the integral functions

$$i^n \text{erfc} x = \int_x^{\infty} i^{n-1} \text{erfc}\, \xi \, d\xi \qquad (n \geqslant 1), \text{ for } i^0 \text{erfc} x = \text{erfc} x = \frac{2}{\sqrt{\pi}} \int_x^{\infty} \exp(-\xi^2) d\xi.$$

Also examined was the function $I^n \text{erfc} x = A_n i^n \text{erfc} x$, with $I^0 \text{erfc} x = i^0 \text{erfc} x$.
Such series as, e.g., the MacLaurin series were obtained:

Card 1/2

Functions Satisfying the Differential
Equation $y'' \pm 2xy' \pm 2ny = 0$

84320
S/170/60/003/009/016/020 X
B019/B060

$$I^n \text{erfcx} = \sum_{m=0}^{\infty} (-1)^m \frac{A_n}{A_{n-m}} \cdot \frac{x^m}{m!}$$ (3). In the second part the differential

equation $y'' + 2xy' + 2ny = 0$ is shown to be satisfied by the function
$i^{-n}\text{erfcx}$, and in the third part the Hermitian polynomial $H_n(x)$ is found
to satisfy the differential equation $H_n''(x) - 2xH_n'(x) + 2nH_n(x) = 0$ and $H_{-n}(x)$
the differential equation $H''_{-n}(x) - 2xH'_{-n}(x) - 2nH_{-n}(x) = 0$. The follow-
ing relations exist between the functions $H_n(x)$, $H_{-n}(x)$, $i^n\text{erfcx}$, and
$i^{-n}\text{erfcx}$:
$$i^{-(n+1)}\text{erfcx} = \frac{2}{\sqrt{\pi}}e^{-x^2}H_n(x), \quad i^n\text{erfcx} = \frac{2}{\sqrt{\pi}}e^{-x^2}H_{-n(n+1)}(x).$$

Proceeding from these relations, formulas are developed for numerical
calculations. There are 5 references: 2 Soviet and 3 British.
ASSOCIATION: Vychislitel'nyy tsentr AN SSSR, g. Moskva
                (Computing Center of the AS USSR, Moscow)
SUBMITTED: March 4, 1960
Card 2/2

GAVRILOVA, R.I.; PRUDNIKOV, A.P.

Problem in the theory of thermal conduction.   Inzh.-fiz.zhur. no.5:
136-137 My '60.   (MIRA 13:8)

1. Institut energetiki AN BSSR, Minsk.
                    (Heat—Conduction)

GAVRILOVA, R.I.

Kinetics of drying with variable heat and mass transfer coefficients.
Inzh.-fiz. zhur. 7 no.8:37-42 Ag '64.   (MIRA 17:10)

1. Institut teplo- i massoobmena AN BSSR, Minsk.

BERLYAND, O.S.; GAVRILOVA, R.I.; PRUDNIKOV, A.P.; DITKIN, V.A., prof.,
    otv. red.; BARABANOVA, Ye., red. izd-va; SIDERKO, N., tekhn.
    red.

    [Tables of integral functions, errors, and Hermitian polynomials]
    Tablitsy integral'nykh funktsii oshibok i polinomov Ermita. Minsk,
    Izd-vo Akad. nauk BSSR, 1961. 163 p.   (MIRA 14:10)
            (Mathematics—Tables, etc.)

GAVRILOVA, R.K.

PHASE I BOOK EXPLOITATION   SOV/5134

Moscow. Inzhenerno-fizicheskiy institut

Uskoriteli; sbornik statey (Accelerators; Collection of Articles)
Moscow, Atomizdat, 1960. 163 p. Errata slip inserted. 3,600
copies printed.

Sponsoring Agency: Ministerstvo vysshego i srednego spetsial'nogo
obrazovaniya RSFSR.

Ed. (Title page): O. A. Tyagunov, Doctor of Technical Sciences,
Professor; Tech. Ed.: S. N. Popova.

COVERAGE: The book contains articles by staff members of the De-
partment of Electrophysical Installations of the MIFI (Moscow Engi-
neering Physics Institute), reflecting theoretical and experimental
investigations of linear electron accelerators, betatrons and
synchrotrons. One article deals with ion sources for cyclotrons.
The theoretical papers on linear electron accelerators are a
continuation of similar research papers published in the col-
lection of articles "Linejnye uskoriteli" (MIFI edition, 1959).
In the dynamics of particles in these machines. The theoretical
part of a particle trapping for acceleration, conditions in
betatrons and synchrotron contain a mathematical solution of that
of particles in the beam and the inductive properties of experimental
in the moments of onset and break. A number of experimental
investigations deals with measurements at set and end with electron
accelerator and betatron components, while (t special), proposed a
erced with the linear cyclic accelerator (betatron) in question,
few years ago by one of the coauthors of the article in question.
No personalities are mentioned. References accompany most of the
articles.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

JV/gmm/os
5/12/61

Card 5/5

S/759/62/000/004/003/016
D207/D308

AUTHORS: Gavrilova, R. K., Milovanov, O. S. and Sobenin, N. P.

TITLE: Experimental data on the frequency response character-
             istic of a circular diaphragm-type waveguide with a
             constant phase velocity

SOURCE: Inzhenerno-fizicheskiy institut. Uskoriteli, no. 4,
             1962, 12-19, Moscow

TEXT: A method is given for the assembly of sections of a circu-
lar waveguide which ensures the best frequency characteristic in a
linear electron accelerator. The waveguide used in this work had
the following parameters: $a/\lambda = 0.155$, $a/b = 0.383$, $\beta = 0.998$;
here a is the radius of the apertures in the diaphragms (corruga-
tions), b is the inner radius of the waveguide itself, β is the
phase velocity and λ is the wavelength. The sections consisted
each of one ring (internal diameter tolerances of -20 to +50 μ,
thickness tolerances of -10 to -150 μ) and one annular diaphragm
(aperture diameter tolerances of -10 to -40 μ). It is shown that

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Experimental data on ...

S/759/62/000/004/003/016
D207/D308

the best frequency characteristic is obtained by assembling these
sections according to increasing or decreasing frequency g of $\pi/2$
modes in them. The frequency f need not be known: only the devia-
tions Δf from the calculated value of f must be measured. In this
way a good frequency characteristic can be obtained for 1 or 2 m
long waveguides working at λ = 3 cm or less. For example, the
energies of electrons obtained from an accelerator $y-12$ (U-12) were
altered by less than 2% for Δf = 2 Mc/s of the sections assembled
according to increasing or decreasing f. There are 7 figures.

Card 2/2

S/759/62/000/004/004/016
D207/D308

AUTHORS: Gavrilova, R. K., Milovanov, O. S., Sobenin, N. P. and
           Shchedrin, I. S.

TITLE: Frequency response characteristic of a waveguide buncher
           for a linear electron accelerator

SOURCE: Inzhenerno-fizicheskiy institut. Moscow. Uskoriteli,
           no. 4, 1962, 20-28

TEXT: It is shown that a 120 cm long buncher for a 3 MeV accelera-
tor of γ-10 (U-10) type must have a microwave reflection coeffi-
cient not greater than 0.07 at $\pm$ (6-8) Mc/s from the working fre-
quency. The buncher considered is of the corrugated (diaphragm)
type and suffers from (1) relatively high wave admittance in the
first sections producing considerable reflections, and (2) inaccu-
racies in the section dimensions giving rise to further reflections.
The effect (1) can be reduced by using thinner diaphragms. This
does not alter the electron-beam parameters since the accelerating
field intensity does not vary strongly with the diaphragm thick-

Card 1/2

Frequency response characteristic ...   S/759/62/000/004/004/016
                                          D207/D308

ness and the resultant phase velocity changes can be compensated
by varying the inner diameter of the waveguide itself in the first
sections. The effect (2) can be reduced by a suitable selection
of rings and diaphragms forming the buncher sections: three iden-
tical rings, two half-rings and two pairs of diaphragms are used.
The success of this arrangement is demonstrated by almost complete
similarity of the transmission band of the input-waveguide trans-
former and the same transformer coupled to the buncher, indicat-
ing a transformer/buncher reflection coefficient of 0.1 in the
± 15 Mc/s range on both sides of the working frequency. There are
7 figures.

Card 2/2

1. GAVRILOVA, S.

2. USSR 600

4. Rivers - Poland

7. Today and tomorrow of Polish rivers, Mol. kolkh, 20, No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

GAVRILOVA, S. A.

29500

Pyervyye Russkiye Shkol'nyye Gxeografichyeskiye Atlasy. Trudy Tsyentr. Nauch-is_lyed. ih-ta Gyeodreeii. Aeros"yemki i Kartografii. vyp. 55, 1949, s, 8.14.

So: Letopis' No. 40

GAVRILOVA. S. A.

Russian geographical atlases for schools.   Vop. geog. 27, 1951.

BARANSKIY, Nikolay Nikolayevich; TEREKHOV, P.G., redaktor; GAVRILOVA, S.A.,
redaktor; KOSHELEVA, S.M., tekhnicheskiy redaktor

[Historical survey of geography textbooks, 1876-1934] Istoricheskii
obzor uchebnikov geografii; 1876-1934. Moskva, Gos. izd-vo geografi-
cheskoi lit-ry, 1954. 501 p.   (MLRA 8:3)
        (Geography--Textbooks)

GAVRILOVA, S.A.

Maps of Leonardo da Vinci. Vop.geog. no.34:161-173 '54. (MLRA 7:12)
        (Maps, Early) (Leonardo da Vinci, 1452-1519)

GAVRILOVA, S.A.; KOMKOV, A.M.

"Russian economic maps and atlases." A.I.Preobrazhenskii. Reviewed by
S.A.Gavrilova, A.M.Komkov. Vop.geog. no.34:187-191 '54. (MLRA 7:12)
(Preobrashenskii, A.I.) (Geography, Economic)

GAVRILOVA,S.A.

School cartography. Vop.geog. no.37:38-46 '55. (MLRA 8:12)
(Geography--Study and teaching) (Kolosovskii, Nikolai Nikolaevich,
1891-1954)

GAVRILOVA, S.A.

The centenary of "Petermanns Geographische Mitteilingen." Vop.geog.
no.42:196-198 '58.   (MIRA 11:11)
                (Germany—Geography—Periodicals)

GAVRILOVA, S.A.

New foreign books on the history of cartography. Vop.geog.
no.42:221-227 '58.   (MIRA 11:11)
                    (Cartography)

GAVRILOVA, S.A.; POKSHISHEVSKIY, V.V., prof., red.; CHUKANOVA, L.V., red.

[Economic administrative regions of the U.S.S.R.: catalog of new literature on nature, resources and economy] Ekonomicheskie administrativnye raiony SSSR; ukazatel' novoi literatury po prirode, resursam i khoziaistvu. Pod red. V.V.Pokshishevskogo. Moskva. No.8. [Regions of the Far East] Raiony Dal'nego Vostoka. 1958. 42 p.   (MIRA 12:10)

1. Akademiya nauk SSSR. Institut nauchnoy informatsii.
        (Siberia, Eastern--Economic conditions)

SEMENOV, A.I., otv.red.; FILIPPOV, Yu.V., prof., doktor tekhn.nauk, red.;
BASHLAVIN, V.A., kand.tekhn.nauk, red.; VOYNOVA, V.V., red.; GURARI,
Ye.L., kand.ekonom.nauk, red.; GUREVICH, I.V., red.; ZHIV, I.S., red.;
ZARUTSKAYA, I.P., red.; ZASLAVSKIY, I.I., red.; KOZLOV, F.M., red.;
NIKISHOV, M.I., kand.geograf.nauk, red.; SADCHIKOV, S.F., red.;
TIKHOMIROV, D.I., red.; TUTOCHKINA, V.A., red.; BALANTSEVA, I.A., red.
kart; BOGDANOVA, L.A., red.kart; BOCHAROVA, I.L., red.kart; VENEVTSEVA,
G.P., red.kart; VOLKOVA, A.P., red.kart; GOSTEVA, N.A., red.kart;
YEFIMOVA, G.N., red.kart; ZHIV, D.I., red.kart; KRAVCHENKO, A.V., red.
kart; KUBRIKOVA, N.S., red.kart; KUZNETSOVA, N.A., red.kart; KURSAKOVA,
I.V., red.kart; LOBZOVA, N.A., red.kart; MERTSALOVA, L.M., red.kart;
MOSTMAN, S.L., red.kart; PANFILOVA, M.V., red.kart; SEMENOVA, V.D.,
red.kart; SMIRNOVA, T.N., red.kart; TERESHKOVA, V.S., red.kart;
FEDOROVSKAYA, G.P., red.kart; FETISOVA, N.P., red.kart; FIL'GUS, Z.Kh.,
red.kart; SHAPIRO, Ye.M., red.kart; SHISHKIN, Ye.A., red.kart; YASHU-
NICHKINA, Ye.G., red.kart. V razrabotke kart prinimali uchastiye:
ALISOV, B.A., prof.; BERZINA, M.Ya.; VASIL'EVSKIY, L.I.; GAVRILOVA,
S.A., kand.geograf.nauk; GINZBURG, G.A., kand.tekhn.nauk; DOBOSHINSKAYA,
T.B.; YEVSTIGNEYEVA, A.I.; LAVRENKO, Ye.M., prof.; LOZINOVA, V.M., kand.
tekhn.nauk; MILANOVSKIY, Ye.Ye., kand.geologo-mineral.nauk; MIKHAYLOV,
A.A., prof.; MYSHKIN, Ye.P.; PUZANOVA, V.P., kand.geograf.nauk;
(Continued on next card).

SEMENOV, A.I.——(continued) Card 2.
    ROZOV, N.N., prof.; SMIRNOV, D.I.; TARASOV, A.P.; TROFIMOVSKAYA,
    Ye.A., kand.geograf.nauk; TUGOLESOV, D.A., kand.geologo-mineral.
    nauk. ZININ, I.F., tekhn.red.

[Geographical atlas for secondary school teachers] Geograficheskii
atlas; dlia uchitelei srednei shkoly. Izd.2. Moskva, Glav.upr.
geodezii i kartografii MVD SSSR, 1959. 191 p.   (MIRA 12:11)

1. Predstavitel' Nauchno-issledovatel'skogo instituta metodov obu-
cheniya Akademii pedagogicheskikh nauk RSFSR (for Zaslavskiy).
2. Predstavitel' Upravleniya shkol Ministerstva prosvyashcheniya
RSFSR (for Tutochkina). 3. Chleny-korrespondenty AN SSSR (for Lavrenko,
Mikhaylov).
                        (Maps)

GAVRILOVA, S. A., AND PERFICHENKO, I. I.

"Organization of Geographical Bibliography in the USSR"

report to be submitted for the Intl. Geographical Union, 10th General Assembly
and 19th Intl. Geographical Congress, Stockholm, Sweden, 6-13 August 1960.

NIZHARADZE, Nadim Izetovich, kand. geogr. nauk, dots; GAVRILOVA, S., red.;
DZHIBUTI, N., red.; GOBRONIDZE, V., tekhn. red.

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Present state of the geography section in the Universal Decimal
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NTI no.8:11-12 '63.   (MIRA 16:10)

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A new version of the section "Geography" in the universal
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Comparison of the content of the sections on geodesy, aerophotography,
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classification system of the Moscow Public Library, and the system
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GAVRILOVA, S.A., Cand Chem Sci—(diss) "Study in the field of hetero-
polycompounds of ~~four-valence~~ *tetravalent* cerium." Mos, 1958. 9 pp (Mos Order of

Lenin and Order of Labor Red Banner State U im M.V.Lomonosov (KL,45-58, 142

– 21 –

AUTHORS: Shakhova, Z. F., Gavrilova, S. A.   78-3-6-13/30

TITLE: Synthesis of Cerium Molybdenum Heteropolyacids (K sintezu
               tserimolibdenovoy geteropolikisloty)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 6,
               pp. 1370-1373 (USSR)

ABSTRACT: The heteropolyacids of the rare earths have been investigated
               relatively little. In the present paper the heteropolyacid
               of cerium with molybdic acid was isolated in pure form and
               investigated.
               The cerium molybdenum heteropolyacid was isolated in pure
               form by the chromatographic method using cationites. It was
               found that the greatest yield of cerium molybdenum hetero-
               polyacid can be obtained by means of the cationite KU-2.
               The analysis of the cerium molybdenum heteropolyacid shows
               that the ratio of Ce : Mo is - 1 : 12 in the solution.
               The cerium molybdenum heteropolyacid was isolated in form of
               a yellow vitreous mass. The solution of cerium molybdenum
               heteropolyacid was investigated spectrophotometrically and
               it was found on this occasion that the absorption maximum
               is at $\lambda = 380$ mμ. An analytical method for the analysis of

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Synthesis of Cerium Molybdenum Heteropolyacids   78-3-6-13/30

the cerium molybdenum heteropolyacid was elaborated. An
ammonia salt of the cerium molybdenum heterpolyacid was
produced and analyzed. This salt has the followinf composition:
$(NH_4)_8[Ce(Mo_2O_7)_6] \times H_2O$.
There are 6 tables and 6 references, 2 of which are Soviet.

SUBMITTED: March 11, 1957

AVAILABLE: Library of Congress

1. Cerium molybdenum heteropolyacids--Synthesis   2. Chromatographics
--Applications

Card 2/2

AUTHORS: Shakhova, Z. F., Gavrilova, S. A.   75-13-2-10/27

TITLE: Photometric Determination of Cerium as Cerium-Molybdenum
             Heteropolyacid (Fotometricheskoye opredeleniye tseriya
             v vide tserimolibdenovoy geteropolikisloty)

PERIODICAL: Zhurnal Analiticheskoy Khimii, 1958, Vol. 13, Nr 2,
             pp. 211-214 (USSR)

ABSTRACT: Of the photometric determination methods for small
             quantities of cerium, described in publications, this
             method is most sensitive and widely spread, being based
             upon the formation of a colored complex by hydrogen per=
             oxide in the presence of citrates (References 1,2) or
             carbonates (References 3,4). Other methods (References
             5-12) are either less sensitive or more complicated as
             to their produce. The main deficiency of the method with
             H_2O_2 is that the previous separation of cerium from the
             heavy metals and from molybdenum is absolutely necessary.
             Therefore the authors worked out a new photometric method
             which is based upon the formation of a cerium-molybdenum
Card 1/4   heteropolyacid. The optimum conditions for the formation

Photometric Determination of Cerium and Cerium-
Molybdenum Heteropolyacid

75-13-2-10/27

of this complex were sought. It appeared that the complete=
ness of the formation of the cerium-molybdenum complex de-
pends on the excess of the molybdate in the solution. The
investigations were performed in 0,2 n sulfuric acid solu=
tion. The influence of the concentration of the molybdate
in the solution and the influence of the hydrogen-ion concen=
tration on the completeness of the formation of the complex
was investigated. A 60-fold surplus of sodium molybdate and
a 0,2 sulfuric acid solution were found as optimum condi=
tions for the determination of cerium as cerium-molybdenum
heteropolyacid.
The authors also investigated the stability of the formed
complex. The cerium-molybdenum heteropolyacid shows a good
time stability, the stability however, being temperature
dependent. A temperature rise reduces the intensity of the
color. Besides, the stability of the already formed cerium-
molybdenum complex was examined in the case of a change of
the hydrogen-ion concentration. It appeared, that the com=
plex is decomposed in case of increase of the hydrogen-ion
concentration. In case of addition of hydrochloric acid the

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Photometric Determination of Cerium and Cerium-Molybdenum 75-13-2-10/27
Heteropolyacid

change of the optical density is different, as it is caused
by a redox-reaction. A comparison with perchloric acid showed
that the complex is decomposed by the increase of the hydro-
gen-ion concentration and not by the complex-forming action
of sulfuric acid. The cerium-molybdenum complex is stable
only in a small range of the hydrogen-ion concentration,
this in 0,1n - 0,3n sulfuric acid and in up to 0,4n per=
chloric acid solution. The color intensity of the solutions
of the cerium-molybdenum heteropolic acid obeys the Beer
law. The sensitivity of the reaction is 1 γ Ce per ml. For
the photometric determination that much sulfuric acid is
added to a solution, containing 0,025 to 0,4 mg cerium, so
that the concentration in the final volume is 0.2n. Then
12 ml of a 5% neutral solution of sodium molybdate or 1o ml
of a 5% ammonium molybdate solution is added, diluted with
water to 25 ml and then the optical density is measured after
1o minutes on a spectrophotometer of the type SF-4 at 380 mμ

Card 3/4

Photometric Determination of Cerium-Molybdenum   75-13-2-10/27
Heteropolyacid

        (gap width 0.4 mm).
        There are 7 figures, 1 table and 12 references, 7 of which
        are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
             (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: March 12, 1957

        1. Cerium--Determination   2. Cerium-molybdenum compounds--Analysis
        3. Photometry--Applications

Card 4/4

SHAKHOVA, Z.F.;GAVRILOVA, S.A.

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        (Cerium compounds) (Molybdates)

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Synthesis of molybdothoric heteropoly acid. Zhur.neorg.khim. 7 no.7:1752-1753 Jl '62.
(MIRA 16:3)

(Molybdothoric acid)